WRITTEN ANSWERS TO UNSTARRED QUESTIONS

Study on avalanches

†2107. SHRI JAI PARKASH AGGARWAL: Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Government have conducted or propose to conduct any study on national calamities like land slide and avalanche hitting some parts of the country almost every year;

(b) if so, the details thereof;

(c) whether any system is in place to identify such places for precautionary measures; and

(d) if so, the details thereof?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) and (b) Yes, Sir.

Study of all landslides is undertaken almost every year including recurring type, in the northeastern and northwestern Himalayas, northeastern states of the country and also in the western ghats/Nilgiri hills in the southern part of India by Geological Survey of India (GSI). These are carried out to delineate the tentative causative factors and to suggest suitable slope protective measures. India Meteorological Department issues heavy rainfall forecasts which are one of the factors leading to land slides.

Some of the recurring types of landslides studied recently are:

(i) Sonapur slide on Shillong—Silchar National Highway, Meghalaya; (ii) 9-Mile slide on NH-31A, Lantakhola slide, B-2 slide, Elachi slide, Serwani slide etc. in Sikkim; (iii) Paglajhora slide, Darjeeling, West Bengal; (iv) Devastating Varunavat slide, Uttarkashi, Survee slide, Mussouri, Uttaranchal; (v) Bhilar and some other conspicuous slides in Raigarh District of Maharashtra; (vi) Hospital slide, Coonoor, Tamil Nadu.

The study on snow avalanches in India is done by Snow and Avalanche Study Establishment (SASE), Defence Research and Development Organization, Ministry of Defence. The focus is on helping troops deployed in snow bound avalanche prone areas in their day to day movement. All

†Original notice of the question was received in Hindi.

avalanche prone areas that affect troops movement in western Himalayan region have been registered by SASE.

(c) and (d) Yes, Sir. There are methodologies by which landslide-vulnerable zones can be demarcated. GSI has already completed inventory of about 1150 landslides spread over north eastern states, northeast and north west Himalayas, western ghats and Nilgiri hills. GSI is also engaged in carrying out landslide hazard zonation mapping on different scales to demarcate the landslide prone hilly terrain into different zones according to their degree of susceptibility to landslides. The main purpose of this study is to guide the planners regarding the land use pattern.

The risk reduction due to avalanches is attempted by the following methods:

(i) Avalanche Awareness

(ii) Avalanche Forecasting

(iii) Avalanche Control

Regular Avalanche forecasting bulletins are issued from SASE to people living in avalanche prone areas about impending danger. Civilian population living in the interior region of Himalayas are also informed through Press Information Bureau and local broadcasting stations about the impending danger.

Study on global warming

†2108. SHRI JAI PARKASH AGGARWAL: Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether any scientific study on impact of global warming on climate changes, has been conducted;

(b) whether various parts of the country have witnessed such extreme conditions of climate such as tsunami, excessive rains, and drought because of this impact;

(c) if so, the details of areas most affected by climatic changes; and

(d) the details of international deliberations on this issue, various aspects concerning its prevention, and consensus arrived at various fora to overcome its impact?

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